All sediment samples will be analyzed for PCB congeners and total organic carbon. Qualitative data on sediment composition, appearance, etc., will also be recorded, and sediment cores will be photographed.

3.6 Caged Fish and Caged Semipermeable Membrane Device Sampling

Caged young-of-the-year (YOY) channel catfish (*Ictalurus punctatus*) are routinely used by the MDEQ and others as indicators of bioavailable contaminant concentrations. Caged fish are superior to mobile resident fish as indicators of site-specific contaminant concentrations. Channel catfish are used rather than other species such as fathead minnows *(Pimephales promelas)* because catfish are more tolerant of poor water quality conditions.

SPMDs consist of a polyethylene membrane packet containing a small amount of the triglyceride lipid, triolein. SPMDs accumulate hydrophobic contaminants by passive diffusion, in a manner similar to many aquatic organisms, and have been used as surrogates for fish in a variety of studies. SPMDs are especially useful for determining site-specific concentrations of bioavailable contaminants in locations where aquatic organisms may not survive.

Caged channel catfish and caged SPMDs will be deployed as near as possible to ten of the eleven locations at which resident fish will be collected (**Table 3.2**). Four composite samples of whole-body channel catfish and three SPMDs will be collected at each location. Both caged fish and caged SPMDs will be left in-place for 28 days, in the late summer/early fall (**Appendices D and E**). The SPMDs will be retrieved three times during the exposure period, to clean them of biofouling organisms. At those times, water column dissolved oxygen measurements will be made to assess whether the caged fish are under stress.

Caged fish and SPMDs will be analyzed for PCB congeners, and the fish tissues will also be analyzed for total lipids. Lipid data will be used to normalize the wet weight PCB concentrations. PCB data from caged fish and SPMDs will be assessed for comparability to other sample media following the 1999 field season.